

Title (en)

High density connector and method of manufacture

Title (de)

Steckverbinder hoher Kontaktdichte und Herstellungsverfahren

Title (fr)

Connecteur à haute densité et procédé de fabrication

Publication

EP 1441417 A2 20040728 (EN)

Application

EP 04006131 A 19971010

Priority

- EP 97117583 A 19971010
- US 72819496 A 19961010
- US 77757996 A 19961231
- US 77838096 A 19961231
- US 77839896 A 19961231
- US 77780696 A 19961231

Abstract (en)

Electrical connectors capable of being mounted on circuit substrates by BGA techniques are disclosed. Also disclosed is a method for manufacturing such connectors. There is at least one recess on the exterior side of the connector elements. A conductive contact extends from adjacent the interior side of the into the recess on the exterior side of the housing (12). A controlled volume of solder paste is introduced into the recess. A fusible conductive element, in the form of solder balls (222, 224, 228) is positioned in the recess. The connector is subjected to a reflow process to fuse the solder ball (222, 224, 228) to the portion of the contact extending into said recess. Contacts are secured in the insulative housing (12) of the connector by deformable sections that minimize stress imposed on the housing, thereby reducing warpage. Solder resist areas are formed on central portions of the contacts to promote uniformity of solder volume. As a result of these features, substantial coplanarity of the BGA array along the mounting interface of the connector is achieved. <IMAGE>

IPC 1-7

H01R 9/09; **H01R 23/72**; **H05K 3/34**

IPC 8 full level

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CPC (source: EP)

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C-Set (source: EP)

H01L 2924/0002 + **H01L 2924/00**

Citation (examination)

- WO 9514312 A1 19950526 - BERG TECH INC [US]
- US 4679874 A 19870714 - SAIJO EIJI [JP], et al
- US 3494998 A 19700210 - ANHALT JOHN W

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EP 1311032 A1 20030514; **EP 1311032 B1 20060920**; EP 1311029 A1 20030514; EP 1311029 B1 20060913; EP 1311030 A1 20030514; EP 1311030 B1 20060920; EP 1311031 A1 20030514; EP 1311031 B1 20060920; EP 1441417 A2 20040728; EP 1441417 A3 20041201; EP 1617519 A2 20060118; EP 1617519 A3 20071212; EP 1617519 B1 20130227

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